

An immunofluorescence study of the sarcoglycan sub-complex in gingival epithelium both in normal and in pathological conditions

Magaudda L., Cutroneo G., Centofanti A., Isola G., Vaccarino G., Righi M. and Di Mauro D.

Department of Biomedical Sciences and Morpho-functional Images

Sarcoglycans are transmembrane glycoproteins which provide the connection between cytoskeleton and extracellular matrix. Sarcoglycans have been found in many kind of tissues as epithelial tissues where they seem to be involved in cell-cell and cell-extracellular matrix adhesion by their cadherin-like domains; by that, it was supported that sarcoglycans could be also involved in pathological condition of epithelial tissue. Moreover, we have already tested sarcoglycans in altered gingival epithelia of patients treated with bisphosphonates where we have observed that the sarcoglycans staining pattern is influenced by inflammatory condition. For these reasons we have continued our immunofluorescence study on sarcoglycans in gingival epithelia of patients treated with bisphosphonates and also in gingival epithelia of patients affected by periodontitis and scleroderma, two different pathological conditions where it is possible to observe inflammation and alteration of the gingival epithelium. Results obtained from normal samples have shown the presence of a staining pattern for each sarcoglycan in gingival epithelium; pathological results, instead, have shown that the entire sarcoglycan sub-complex changes in staining pattern level depending on the inflammation and alteration degree of the gingival epithelia. All these finding suggest us that sarcoglycans could play a key role in maintenance of epithelia architecture by their machanosignaling function, providing cell-cell and cell-extracellular matrix adhesion using their cadherin like domain.